PATENT

APPEAL FROM THE PRIMARY EXAMINER TO THE BOARD OF PATENT APPEALS IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of	Examiner: Alain L. BASHORE
Arvind Nath PURI et al.	Art Unit: 3624
For: **METHODS AND SYSTEMS ENABLING THE IDENTIFICATION OF ACTUAL COSTS IN A TRANSACTION BASED FINANCIAL AND MANUFACTURING ENVIRONMENT**	Confirmation No.: 5167 Customer No.: 22430
Serial No.: 09/235,120	
Filed: January 21, 1999	**APPEAL BRIEF**
Atty. Docket No.: ORCL5543	

CERTIFICATE OF EXPRESS MAIL PURSUANT TO 37 CFR §1.10

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Nita J. Miller

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Director of the United States Patent and Trademark Office
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Sir:

Prosecution History

This application was filed January 21, 1999; the first Office Action was mailed March 28, 2001, and a responsive Amendment was filed August 23, 2001. A final Office Action was mailed October 19, 2001, and a responsive CPA and Preliminary Amendment were filed February 14, 2002. An Office Action was mailed April 24, 2002, and after a telephone interview was conducted August 20, 2002, an Amendment was filed August 21, 2002. A second final Office Action was

mailed November 4, 2002 and an Amendment Under 37 C.F.R. §1.116 was filed April 3, 2003. After the mailing of an Advisory Action on April 15, 2003, an RCE was filed May 1, 2003, followed by another Office Action mailed July 17, 2003, then an Amendment was filed December 17, 2003, followed by another Office Action mailed February 6, 2004. After a second telephone interview was conducted May 17, 2004, an Amendment was filed July 6, 2004. A third final Office Action, from which this appeal is taken, was mailed October 13, 2004 and the requisite Notice of Appeal was filed on January 4, 2005. The present Appeal Brief is being filed in triplicate, together with a request for an extension for response within first month and the appropriate fees.

Real Party in Interest

The real party in interest is Oracle International Corporation; a corporation that is organized under the laws of the state of California and that has its principal place of business at 500 Oracle Parkway, Redwood Shores CA 94065 USA. The real party in interest, Oracle International Corporation, obtained the entire right, title and interest in and to the present patent application by virtue of an assignment from the original assignee, Oracle Corporation, executed on February 18, 2003, and recorded in the USPTO on March 4, 2003 at Reel/Frame 013808/0035. The original assignee obtained the entire right, title and interest in and to the present application by virtue of an assignment from the inventors to Oracle Corporation executed on January 8, 11 and 12, 1999, respectively, and recorded in the USPTO on January 21, 1999 at Reel/Frame 9724/0579.

Status of Claims

Claims 1-27 were originally presented for examination. The current status of the claims is as follows: claims 1-7, 9-12, 14-18 and 21-27 are pending and claims 8, 13, 19-20 and 25 are

canceled. The rejection of each of the claims 1-7, 9-12, 14-18 and 21-24 and 26-27 is appealed herewith.

Summary of the Invention

To determine the profitability of a business requires an accurate determination of, among other factors, the cost of doing business. However, the final and total cost of performing a service or manufacturing an item is typically not ascertainable until after the all associated costs have been collected and reported, generally after the service has been performed or the item manufactured. In an attempt to overcome such limitations, a number of assumptions regarding the cost of performing a service or manufacturing an item are generally made, to allow the representation of interim costs until the final cost numbers are available. Over time, such assumptions have evolved into the so-called standard costing method, in which the cost of performing a business activity is estimated *a priori*. Typically, standard costs are either estimates derived from historical data collected after performing the business activity or they only represent the system planner's best guess as to the future cost of performing that business activity. However, even when standard costs are regularly updated, the variance between the standard cost assigned to the activity and the cost computed from historical data after the activity has been performed can be great. Such variance tends to increase when the time lag between the assignment of the standard cost and the computation of the cost after the activity has been performed is long.

Another consequence of the pervasive use of standard costing methods is that the choice of the cost collection accounting method drives the choice of the cost presentation accounting method. Indeed, as only approximate costing information is generated by the standard costing method, it is impracticable to present the costs differently than they were collected. For example,

if a First In First Out ("FIFO") cost collection accounting method is used (e.g., in the case wherein it is desired to move old inventory first), then the same FIFO cost presentation accounting method must be used. However, it might be desirable, from a capital gains point of view, for example, to present the same costs using a LIFO cost presentation accounting method, such as when the items or services in question are becoming more expensive as time goes on. As the choice of cost collection accounting method drives the choice of cost presentation method when standard costing methods are used, such de-coupling of cost collection and cost presentation accounting methods, although desirable, has not been possible.

To address the aforementioned disadvantages associated with standard costing methods, the present invention aims to reduce or eliminate the time lag between the performance of a business activity and the collection of the costs associated with performance of the business activity. As defined herein, a "business activity" may be most any undertaking that somehow affects the cost of the products manufactured and/or the services rendered. Embodiments of the present invention call for the actual cost of manufacturing an item or performing a business activity to be collected contemporaneously with the manufacture of the item or the performance of the business activity. Indeed, the actual purchasing costs of items in inventory, the actual item manufacturing costs, the actual job costs or the actual costs of performing the business activity are preferably collected contemporaneously (e.g., during or substantially immediately) after the purchase or manufacture of the item or the performance of the job or activity. The actual costs of manufacturing an item or performing a business activity may be collected at, near or remotely from the location where the item is manufactured or the service performed.

According to the present invention, the phrases "actual cost" or "actual costs" refer to the actual monetary cost(s) of an undertaking, and generally refer to a snapshot of the current true costs associated with the undertaking or a series of undertakings, substantially as the costs are

incurred or substantially immediately after they are collected. In contrast, standard costs offer the accountant or decision-maker what is frequently an inaccurate estimation of future costs based on historical data.

By identifying and collecting the actual cost of manufacturing an item or items and the actual cost of performing a business activity or activities when and where they are manufactured or performed, actual costs may be tracked at whatever level of granularity is necessary or desired. Indeed, according to the present invention, costs may be identified and collected at any level, from the cost of manufacturing a single sub-assembly of a larger device or performing a single operation within a larger job, to the cost of completing the manufacture of a large and complex machine or performing a large service contract. Toward the higher end of the granularity spectrum, the present invention allows, for example, to identify the cost per item manufactured or the cost of each operation within a larger job. For example, the cost of purchasing individual items may be separately identified and collected, as the cost of the same part or item may change with each purchase. For that reason, the individual cost of each item may be tracked and maintained individually. Toward the lower end of the granularity spectrum, the present invention allows the identification and collection of actual costs for entire projects or product lines, companies, across contracts or across any other grouping, organization or physical or legal entity. For example, a manufacturer of small, individually inexpensive fungible items may not need to identify or collect information on the actual costs of manufacturing a single item, but may prefer to identify and collect the actual costs associated with manufacturing a set number of such items, such as a lot of homogeneous items. Indeed, in such a case, the reporting costs may be too high to justify the identification and collection of actual costs for each individual item, and the identification and collection of actual costs for a set number of such items may be entirely sufficient. On the other hand, for costly and unique undertakings, such as,

for example, building automobiles or drilling oil wells, the identification and collection of real time or near real time actual costing data for individual items or undertakings may be paramount. The actual costs may be contemporaneously and manually entered at the job site or may be collected by some automated actual cost collection process.

After the identification and collection of the actual cost of manufacturing an item or items and/or the identification and collection of the actual cost of performing a business activity or activities, the actual costs may be stored in some structure that allows the flexible use and reporting thereof. The claimed invention, to that end, calls for a unique identifier that may be called a Cost Source Identifier, which identifier is hereafter referred to as Cost Source ID.

An embodiment of a Cost Source ID structure is shown in Fig. 1A. The Cost Source ID may be a logical structure 100A that includes the identified and collected actual cost 110 of manufacturing an item or items and/or the actual cost of performing a business activity or activities. The date 120 in which the actual cost 110 is incurred may also be included in the Cost Source ID 100A, as well as the quantity 130 of items or individual services that contributed to the actual cost 110. Any number of other attributes 140, 150 may also be included in the Cost Source ID 100. Alternatively, as shown in Fig. 1B, the Cost Source IDs, such as shown at reference numerals 152, 154 and 156 may be pointers pointing to corresponding data structures 162, 164 and 166 each containing the identified and collected actual cost of manufacturing an item or items and/or the actual cost of performing a business activity or activities as well as, optionally, the date, quantity and other attributes. The data structures 162, 164 and 166 may be stored in a storage device 160 within a computer, for example. The data structures 162, 164 and 166 pointed to by the Cost Source ID pointers 152, 154, 156 may be stored in a database. With reference to both Figs. 1A and 1B, the Cost Source ID structures may also contain or point to a data structure containing an indication of the nature of the item or items manufactured or the

service or services performed, and/or the number of unit time periods expended to perform an operation or a job.

According to an embodiment of the present invention, a new Cost Source ID is created and assigned each time a transaction occurs that affects the calculation of the actual cost for an item or service. For example, a new Cost Source ID may be created and assigned each time an item or a group of items (e.g., a lot or other grouping of homogeneous items) is received in inventory. A new Cost Source ID may also be assigned after the completion of each operation or selected operations in a multi-operation job. Therefore, a job having multiple constituent operations or a manufactured item having a plurality of sub-parts or sub-assemblies may be assigned a corresponding plurality Cost Source IDs. Each Cost Source ID, then, will include or point to a data or other logical structure that includes at least the actual cost for that sub-part, sub-assembly or operation. Preferably, each Cost Source ID will also include or point to a structure that includes the date in which the item or items were manufactured or the service or services performed. According to the present invention, therefore, unique Cost Source IDs may be created and assigned at least as items are purchased, manufactured, received into inventory, moved from one inventory group into another (e.g., sub-inventory transfers, for example) or as services are performed. An item of manufacture including a plurality of sub-parts or sub-assemblies or a service including a plurality of sub-operations, therefore, may accumulate a plurality of Cost Source IDs during its manufacture or during its performance. Each such Cost Source ID preferably includes or points to a structure that includes at least the actual cost of a sub-part or sub-assembly of the item manufactured or a sub-operation of the service performed.

One of the advantages of tracking actual costs using Cost Source IDs according to the present invention is that the calculation of the actual cost may be carried out in real time or near real time, and reflects the present actual cost of manufacturing, purchasing or otherwise

modifying an item or items of manufacture or the present actual cost of performing a service or services. Another advantage is that the assigned Cost Source ID follows the item as it is manufactured or follows the job as it is carried out. Specifically, as an item moves from one manufacturing stage to the next, it may accumulate unique Cost Source IDs at each stage of manufacturing. In this manner, a plurality of unique Cost Source IDs may become associated with the completed item, thereby allowing a detailed picture of the actual costs of manufacturing the item at any stage of manufacturing. Similarly, a plurality of unique Cost Source IDs may become associated with the completed job, thereby allowing a detailed picture to be obtained of the actual costs of performing the job at any stage of the performance thereof.

By virtue of such accumulated Cost Source IDs, a detailed, real time or near real time snapshot of the actual costs of manufacturing an item or performing a service may be gained by rolling up the actual costs included or pointed to by each of the Cost Source IDs associated with the item or service. For example, to obtain a snapshot of the actual costs of manufacturing an item at a 6th stage (out of 10, for example) of manufacturing, the Cost Source IDs for stages 1 through 6 may be accessed, and the actual costs stored therein or pointed to by the Cost Source IDs for stages 1 through 6 may be accumulated (e.g., added). Likewise, the Cost Source IDs may be utilized after the performance of the service or the manufacturing of the item is completed, to gain insight as to the actual costs of carrying out the business activity in question as of any selected date or manufacturing or performance stage.

As claimed, the Cost Source IDs associated with an item or a job may be organized in a logical structure modeled, for example, after the manufacturing process or the steps defining the performance of a job. That is, the organization of the Cost Source IDs according to the present invention may follow the same organization as the manufacture of the underlying item or the performance of the underlying job. For example, the Cost Source IDs may be organized as a

hierarchical structure modeled on the manufacturing process or modeled on the order of constituent operations of the job to be performed. The actual cost data, as well as the other data associated with the Cost Source IDs may be included in the hierarchical structure itself or may be included in other logical structures pointed to by each of the Cost Source IDs.

The use of Cost Source IDs brings about other advantages, relative to cost accounting methods. Indeed, the use of the standard costing method conventionally meant that the choice of cost collection and/or item picking accounting methods dictated the choice of cost presentation accounting methods. Conventionally, for example, if the selected costing collection accounting method was FIFO, then the cost presentation accounting method was also required to be the FIFO cost presentation accounting method. According to the present invention, however, because actual costing data is available and readily accessible through the Cost Source ID structures, potentially down to the item, sub-assembly or operation level, the cost presentation accounting method may be wholly decoupled from the cost collection accounting method. Indeed, according to the present invention, the accounting method selected for cost collection may be different and independent of the accounting method selected for cost presentation.

In cases wherein actual costs are unknown, a standard cost may be assigned to any transaction that affects the cost of an item or the performance of a service. When standard costs are used, a Cost Source ID is created and the standard cost for the item or the service is stored in the Cost Source ID data structure or in the data structure pointed to by the Cost Source ID. This avoids, for example, including items of unknown cost in inventory. A standard cost may be used, for example, when it is impossible or unduly burdensome to attempt to estimate the useful life of a machine or other equipment. For example, the number of usage cycles over the life of some assets (such as a drilling machine, for example) generally cannot be predetermined.

Cited Art

The prior art rejections, relying upon 35 USC 103(a), are based upon a combination of Conway (U.S. Patent No. 5,732,401) in view of Bone et al. (U.S. Patent No. 4,918,602) and Fahey (U.S. Patent No. 5,970,476).

Issues

The issues on appeal are whether claims 1-7, 9-12 and 14-27 are unpatentable under 35 U.S.C. §103(a) over Conway in view of (Bone et al. and Fahey).

Grouping of Claims

Separate arguments are presented below with respect to independent claims 1, 12 and 17. Separate arguments are also presented herewith with respect to dependent claims 3-5 and 18, with respect to dependent claim 7, with respect to dependent claims 9 and 14 and with respect to dependent claims 11, 23 and 24. Each of these claims is believed to be independently patentable. These claims do not, therefore, stand or fall together. Claims 2, 6 and 10 stand or fall with independent claim 1. Claims 15 and 16 stand or fall with independent claim 12. Lastly, claims 21, 22, 26 and 27 stand or fall with independent claim 17.

Argument

THE PATENT AND TRADEMARK OFFICE HAS FAILED TO DEMONSTRATE OBVIOUSNESS OF CLAIMS 1-7, 9-12 and 14-27 OVER THE APPLIED COMBINATION

Standard for Obviousness

Section 706.02(j) of the MPEP, Contents of a 35 U.S.C. §103 Rejection, provides some guidance as to the Office's initial burden in formulating a §103(a) rejection:

> **To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success.**

> **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.**
>
> **The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections.**

It is respectfully submitted that the Office has not met its initial burden of showing obviousness, as a combination of the teachings would not teach or suggest all of the claim limitations to one or ordinary skill in the art. Moreover, such a combination would not have a provide the skilled artisan with the required reasonable expectation of success, as detailed below.

1. INDEPENDENT CLAIMS 1, 12 and 17

The following arguments refer specifically to independent claim 1. However, it is understood that these arguments are equally applicable to independent claims 12 and 17 and should be applied thereto, as if repeated in full.

Independent claim 1 recites:

> **collecting actual costs of performing a job, manufacturing an item and/or purchasing an item,**
>
> **creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields;**
>
> **populating one of the plurality of attribute fields of the created cost source identifier data structure with the collected actual cost;**

The outstanding Final Office Action points to element 28 of the primary reference to Conway for a teaching of "a unique cost source identifier is created for each collected cost and storing the collected actual costs ... ." However, inspection of the Conway reference reveals that

element 28 is a device that reads nearby tags 20 and supplies the identification number thereof to the computer 30. See Column 4, lines 42-49:

> **The tag reader 28 communicates with each of the tags 20 as the tags 20 pass within proximity of the reader 28. Through a wireless communication indicated at 27, tag reader 28 obtains the identifying tag number from a tag 20. The tag reader 28 then supplies this identifying tag number to programmed computer circuitry 30 which processes this information in accordance with methods of the present invention, as discussed in substantially greater detail below.**

The tag reader 28, therefore, is hardware device that may be positioned within a doorway to sense the identifying tag numbers from tags 20 passing through the monitored doorway, as taught in Conway at Column 6, lines 54-67:

> **By positioning portable tag readers 28 at the doorway of the selected room, the system of the present invention might be used, for example, to track the costs associated with all surgical procedures performed at a given healthcare facility. The resulting data might be used to compare the efficiency of various types of procedures for curing the same ailment as well as comparing the efficiency of various individuals or teams of caregivers in providing the same healthcare service. The information obtained in this manner can be extremely useful in determining which of several candidate procedures should be adopted and made part of best practice guidelines for treating a given ailment, and also in determining which physicians or other caregivers are efficient or inefficient in providing patient care services.**

The primary reference to Conway, however, is relied on for a teaching of "A unique cost source identifier is created for each collected actual cost and storing collected actual costs (element 28)" Outstanding Final Office Action, page 2.

It is clear, however, that element 28 of Conway does not:

a) create (unique or otherwise) cost source identifier as claimed;

b) create a unique cost source identifier for each collected actual cost as claimed, or

c) store the collected actual costs.

The tag reader 28 only obtains a preexisting identifying tag number from any tags that passes within its sensing range and supplies the obtained identifying tag number to "programmed computer circuitry 30." Conway's collected identifying tag numbers may be used to track "the

costs associated with all surgical procedures at a given healthcare facility." That is, as tags 20 pass within range of the reader 28, their identifying tag numbers are collected and supplied to computer circuitry 30.

Notice, however, that the claimed invention calls for collecting actual costs of performing a job, manufacturing an item and/or purchasing an item, whereupon a unique cost source identifier data structure is created for each collected actual cost. The primary reference to Conway does not teach to collect actual costs and thereafter to create a unique cost source identifier for each collected cost, as claimed, notwithstanding the Office's contention that "A unique cost source identifier is created for each collected actual cost and storing collected actual costs (element 28)" outstanding final Office Action, page 2. In Conway, the tags 20 are created with supposedly unique "identifying tag numbers" (necessarily before any costs are incurred), and those pre-existing tag numbers are then sensed by the reader 28, and may thereafter be used to track costs.

In contrast to the Office's stated position regarding Conway on page 2, on page 3 of the outstanding Office Action, the Office then acknowledges that Conway does not explicitly disclose "a new unique cost identifier is created and stored upon each occurrence of a transaction that affects the actual cost of carrying out the activity" (Emphasis in the Original). For such a teaching, the Office relies upon the Fahey secondary reference: "Fahey is utilized to modify the cost identifiers of Conway for specific steps to be new unique cost identifiers created and stored upon each occurrence." Middle paragraph, page 5, outstanding Office Action. The Office further states on page 4 that

> **it would have been obvious to include new unique identifiers ... upon each occurrence of a transaction that affects the actual cost of carrying out an activity because of what is taught be Fahey. Fahey teaches that a decision support system methodology requires current identifiers. (Col 1, lines 25-35).**

Inspection of Fahey at Col. 1, lines 25-35 (and of the entirety of this reference) reveals that Fahey teaches no such thing as "current identifiers":

> **It is desirable to provide a data warehouse which contains data that more accurately reflects the enterprise wide production and indirect support costs attributed to product families and individual products. It is further desirable to assign proportionate amounts of enterprise wide production and indirect support costs in response to a measurable quantity associated with the specific product family or product.**

Therefore, the very passage identified by the Office for a teaching of the claimed step of "creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields" is entirely silent on the issue of creating a unique cost source identifier for each collected actual costs, as claimed. Next, the Office points to Fahey's Table 1 of Fahey (Column 7, lines 1-45) and Fig. 4c. However, the Activity categories of Table 1 are not unique cost source identifier data structures that include a plurality of fields that may be populated and stored, as claimed. The Activity Categories of Fahey are simple codes that correspond to various activity centers to which costs may be assigned. The activity center codes of Fahey's Table 1 are, by definition, not unique, as required by the claims. In fact, any and all costs incurred within the Machine Shop involving drilling and/or milling, to use an example taken from Fahey, will be assigned to activity center I(A)(1)(b), the "Drill and mill activity center." Moreover, it is clear the Fahey's activity center codes are necessarily created before the costs chargeable to the activity center are assigned to them. Kindly recall that claim 1 requires that the applied combination teach or a suggest steps of:

> **collecting actual costs of performing a job, manufacturing an item and/or purchasing an item,**
>
> **creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields;**

In contrast, the claimed inventions call for: 1) the costs to be collected; and 2) for a unique cost source identifier to be created for each collected actual cost. Fahey does not do this

or suggest the utility or desirability of doing so – alone or in combination with the code reader 28 of Conway located in doorways of healthcare facilities. Simply put, the Conway – Fahey combination does not teach to collect actual costs and thereafter to create a unique cost source identifier for each collected actual cost, as required by the claims. At most, the applied combination would teach to one or ordinary skill in the art to attach tags 20 to people and to consumables and to detect their passage through a monitored doorway through the use of a reader 28, as called for by Conway, combined with the use of activity center codes as taught by Table 1 of Fahey. Such a system could be used to detect the use of people and consumables by means of the detection of the identifying tag numbers encoded within the tags 20 by means of a doorway-mounted code reader 28 and to assign a cost to the use of such people and consumables and to assigned these costs to one of a predetermined pre-existing plurality of activity centers, as taught by Fahey. Such a combination would still leave wholly unsuggested the invention of claim 1, particularly with respect to the creation of unique cost source identifiers for each collected cost, as claimed.

The applied combination, therefore, is not believed to teach or to suggest the presently claimed embodiments, as none of the applied references, either considered singly or in combination, teach or suggest the claimed cost source identifier data structures having a plurality of attribute fields that are populated, as claimed. Moreover, the applied combination does not teach or suggest any hierarchical structure of such populated cost source identifier data structures, as also claimed.

Claim 1 on Appeal continues:

> **populating one of the plurality of attribute fields of the created cost source identifier data structure with the collected actual cost;**
>
> **storing the populated cost source identifier data structure in a memory of a computer;**

associating each unique cost source identifier data structure to a step carried out while manufacturing the item or while performing the service; and

organizing and storing the cost source identifier data structures within the computer as a hierarchical structure that is modeled on:

a structure of the item manufactured or

a sequence of operations carried out while performing the service;

implementing a selected accounting costing method for actual cost collection and a selected accounting costing method for actual cost presentation by accessing and selectively traversing the hierarchical structure, the selected accounting costing method for actual cost collection being independent of the selected accounting costing method for cost presentation.

The outstanding rejection relies upon Bone et al. for a teaching of accounting costing methods for cost collection and presentation that are independent of each other, and cites Col. 1, lines 10-60 and Col. 2, lines 30-55 as teaching such features.

However, Col. 1, lines 10-60 teach nothing of the sort. Instead, the cited passage introduces integrated data management systems (IDMS), relational operators useful in extracting information from tables, and relates such IDSM systems to the banking industry and different software packages. Moreover, the sole mention of the term "accounting" in the patent is in describing U.S. Patent No. 4,346,442. Col. 2, lines 30-55 does not teach or describe implementing any accounting costing methods for cost collection or presentation either. Instead, the cited passage describes the function of the disclosed system's CPU, the planner interactive means and how the planner interactive means and the CPU cooperate to display processes and the described "log points." Absolutely no mention of any cost accounting methods, for either cost collection or cost presentation, are disclosed or even hinted at in the passage pointed to in the outstanding Office Action as teaching such costing methods.

Combining the Conway and Bone et al. reference, therefore, does not yield any teaching or suggestion of independent costing methods for cost presentation or collection, any teaching or suggestion of creating a unique cost identifier upon the occurrence of an event that affects the

actual cost of carrying out the activity, and does not teach or suggest any costing methods based upon such unique collected and stored cost source identifiers.

It is respectfully submitted, therefore, that neither of the two secondary references, even when considered in combination with the primary reference, may be fairly said to teach or to suggest the claimed invention. If the skilled artisan would, for some reason, to combine these references as suggested by the Office, the claimed invention would not result or suggest itself, for the factual reasons developed above. That is, the skilled artisan would have very little expectation of success in developing the embodiment of claim 1 based upon his or her own knowledge in the art and any knowledge or suggestion gleaned from the applied combination.

Kindly recall the Office's own guidelines on establishing a prima facie case of obviousness:

> **To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.**

In the present case, not only is a reasonable expectation of success absent, but the combination would utterly fail to teach or to suggest all of the claim limitations, as developed above. At the very least, the combination does not teach or suggest creating a unique cost source identifier for each actual cost, nor does the applied combination teach or suggest implementing a selected accounting costing method for actual cost collection and a selected accounting costing method for actual cost presentation by accessing and selectively traversing the hierarchical structure, as claimed. Moreover, any reasonable expectation of success is to be found only in the

applicant's disclosure, and not in any of the applied references, whether taken alone or in combination. In fact, the combination would tend to lead the person of ordinary skill astray (i.e., away from the claimed invention), in that both Conway and Fahey teach that predetermined and pre-existing identifiers (identifying tag numbers in Conway), and predetermined and pre-existing centers codes (Activity Center Codes in Fahey) should be used to store costs of carrying out business-related activities. In direct contrast, the claimed invention calls for: 1) collecting costs; and 2) the creation of a unique cost source identifiers for each collected cost. Adding Bone et al. to the mix does not remedy these fundamental shortcomings, nor does this reference teach or suggest any manner of cost accounting methods, for either cost collection or cost presentation, as called for and as required by claim 1. For these reasons, it is respectfully submitted that the applied combination does not teach or suggest the claimed subject matter and that the skilled artisan would not have a reasonable expectation of success in any endeavor aimed to construct the claimed invention on the basis of his or her own knowledge and that gleaned from the applied combination. For the foregoing reasons, therefore, it is respectfully requested that the Board reconsider and reverse the obviousness rejection of independent claims 1, 12 and 17 and of their respective dependent claims.

2. DEPENDENT CLAIMS 3-5 and 18

Dependent claims 3 and 18 on Appeal recite

> **a new unique cost source identifier data structure is created upon each occurrence of a transaction that affects the actual cost of the activity that gave rise to the collected actual cost.**

Claims 3 and 18 recite that a new cost source identifier is created upon each occurrence of a transaction that affects the actual cost of the activity that gave rise to the collected actual cost. For reasons developed above, the Conway-Fahey combination does not teach or suggest

creating new unique cost source identifiers. Quite to the contrary, the activity centers codes necessarily predate the collection of any costs and are not unique (or new) cost source identifier data structures that include a plurality of fields that may be populated and stored, as claimed. The Activity Categories of Fahey are simple pre-existing codes that correspond to various pre-defined activity centers to which costs may be assigned. The Office to date has not pointed out any teaching or suggestion in the applied combination that would lead a person of ordinary skill in this art to create a new cost source identifier upon each occurrence of a transaction that affects the actual cost of the activity that gave rise to the collected actual cost (claim 3), at least each time an item is manufactured or purchased and each time an item is received into inventory (Claim 4), each time a job is performed while manufacturing the item or while performing the service, contemporaneously with a performance of the job (Claim 5) or for each constituent item or operation that affects the cost of manufacturing the item or performing the service (claim 18). To the contrary, the applied references are quite clear that costs are assigned to pre-existing Activity Centers or like predefined constructs – such as Conway's tag numbers. Failing such a teaching or suggestion, the applied combination cannot render claims 3-5 and 18 unpatentable over 103(a), and the outstanding rejections of claims 3 and 18 must be reversed. The same is, therefore, respectfully requested.

3. DEPENDENT CLAIM 7

Independent claim 1 recites:

> **creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields;**
>
> **populating one of the plurality of attribute fields of the created cost source identifier data structure with the collected actual cost**

Dependent claim 7 further recites that the plurality of attribute fields may be configured to store an indication of a date at which the collected actual cost was incurred, a quantity of items corresponding to the collected actual cost, a number of unit time periods expended in performance of a job, an indication of labor time, resource time, payroll, resource rate, overhead time, overhead rate, actual cost of purchased material and/or an actual cost of outside processing. The Conway-Bone-Fahey applied combination does not, for the reasons advanced above, teach or suggest creating a unique cost source identifier data structure for each collected actual cost. Even though one or more of these references may teach or suggest collecting one or more of the of the costs and cost-related information listed in claim 7, the applied combination does not teach or suggest collecting or storing these costs or cost-related information such as recited in dependent claim 7 in a unique cost source identifier data structure for each collected actual cost. Reversal of the obviousness rejection applied to claim 7 is, therefore, believed to be warranted. The same is respectfully requested.

4. DEPENDENT CLAIMS 9 and 14

Independent claim 1 recites organizing and storing the cost source identifier data structures within the computer as a hierarchical structure that is modeled on a structure of the item manufactured or a sequence of operations carried out while performing the service. In turn, dependent claims 9 and 14 recite:

> **. . . wherein the hierarchical structure includes a plurality of nodes, each of the stored cost source identifier logical structures being assigned to at least one of the plurality of nodes.**

The office has not articulated any factual basis within or suggested by the applied combination that would lead a person of ordinary skill in this art to create a unique cost source identifier for each collected cost and to organize the cost source identifiers as a hierarchical

structure that is modeled on the item manufactured or the sequence of operations carried out while performing the service.

As noted in the present specification,

> **The Cost Source IDs associated with an item or a job may be organized in a logical structure modeled, for example, after the manufacturing process or the steps defining the performance of a job. That is, the organization of the Cost Source IDs according to the present invention may follow the same organization as the manufacture of the underlying item or the performance of the underlying job. For example, the Cost Source IDs may be organized as a hierarchical structure modeled on the manufacturing process or modeled on the order of constituent operations of the job to be performed. The actual cost data, as well as the other data associated with the Cost Source IDs may be included in the hierarchical structure itself or may be included in other logical structures pointed to by each of the Cost Source IDs.**
>
> **An example of such an organization is shown in Fig. 2. Fig. 2 shows a hierarchical structure 200 of Cost Source IDs according to the present invention, wherein the hierarchical structure is organized in a manner similar to that of the underlying manufacturing process. The manufacturing process in this example has fourteen steps. As shown in Fig. 2, the item to be manufactured includes two sub-assemblies, referenced as numerals 210 and 220. Sub-assembly 210 is manufactured in four separate operations, and each operation is assigned a new unique Cost Source ID, labeled CSID in Fig. 2. Indeed, sub-assembly 210 is manufactured by joining (or fabricating, purchasing, modifying, taking from inventory etc.) parts or sub-assemblies A1 and A2 (parts or sub-assemblies in Fig. 2 are referenced as subscripts) to produce part or sub-assembly A3. Each of the parts or sub-assemblies A1, A2 and A3 is associated with a unique Cost Source ID, namely $CSID_{A1}$, $CSID_{A2}$ and $CSID_{A3}$, respectively... (Specification, pages 14-15)**

From Table 1 of Fahey, for example, the costs are assigned to Activity Centers that are based upon the General Ledger entries, and not upon the structure of the item manufactured or the sequence of operations carried out while performing a service. See, for example, Fahey, at Column 6, lines 14-22:

> **Referring to FIG. 2, a general overview of the control of data flow in accordance with the present invention between subsystems will be better appreciated. Recall that the financial data of the company is stored in the general ledger database 26. The financial data is stored according to a predetermined data structure that advantageously facilitates identifying financial data in accordance with activity based cost analysis techniques. Data obtained from the other databases is transformed into the same format for use in the present invention.**

It follows that the applied combination, therefore, does not teach or suggest configuring the recited hierarchical structure as "a plurality of nodes, each of the stored cost source identifier logical structures being assigned to at least one of the plurality of nodes.", as required by claims 9 and 14. Recall that each of the cost source identifier(s) assigned to each of the nodes of the hierarchical structure is unique to each collected cost. It is respectfully requested, therefore, that the obviousness rejections applied to claims 9 and 14 be reversed.

5. DEPENDENT CLAIMS 11, 23 and 24

Claims 11, 23 and 24 recite:

> **11. The method of claim 1, further comprising the step of storing a standard cost within the cost source identifier when an actual cost of one of a job performed and an item manufactured is unknown.**
>
> **23. The machine readable medium of claim 17, wherein the sequences of operations further cause said computer system to carry out a step of storing a standard cost when an actual cost cannot be ascertained.**
>
> **24. The machine readable medium of claim 17, wherein the sequences of operations further cause said computer system to carry out a step of storing a standard cost when a transaction cost of collecting the actual cost for any one of said constituent items or operations is excessive relative to a value thereof.**

Claims 11, 23 and 24, in combination with the independent claims from which they depend, call for a standard cost to be stored within the unique cost source identifier. Kindly recall that (as stated in the present specification) according to the standard costing method, the cost of performing a business activity is estimated *a priori*. Typically, standard costs are either estimates derived from historical data collected after performing the business activity or they only represent the system planner's best guess as to the future cost of performing that business activity.

For at least the reasons set out above, the applied combination of references does not teach or suggest creating a unique cost source identifier for each collected cost. According to claims 11, 23 and 24, when the actual cost of performing a business activity is unknown or

cannot be ascertained or when the cost of doing so is excessive relative to the value thereof, a standard cost may be stored in the unique cost source identifier, rather than the actual cost. As the applied combination has been shown not to teach or to suggest to create a unique cost source identifier for each collected cost, it follows that the applied combination cannot fairly be said to teach or to suggest storing standard costs in these created unique cost source identifiers. Moreover, the Office to date has not advanced any factual reasons based upon the applied combination that would support an obviousness rejection of these claims. Reversal of the 35 USC §103(a) rejections applied to claims 11, 23 and 24 are, therefore, respectfully requested.

CONCLUSION

None of the Claims are unpatentable over the applied combinations. Therefore, the appellant respectfully requests a reversal of the rejections and a finding that the pending claims are allowable. An oral hearing is not requested.

Respectfully submitted,

Date: March 8, 2005

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APPENDIX

CLAIMS ON APPEAL

1. **(Previously Presented)** A computer implemented actual costing method for collecting and presenting an actual cost of manufacturing an item or performing a service, comprising the steps of:

collecting actual costs of performing a job, manufacturing an item and/or purchasing an item,

creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields;

populating one of the plurality of attribute fields of the created cost source identifier data structure with the collected actual cost;

storing the populated cost source identifier data structure in a memory of a computer;

associating each unique cost source identifier data structure to a step carried out while manufacturing the item or while performing the service; and

organizing and storing the cost source identifier data structures within the computer as a hierarchical structure that is modeled on:

a structure of the item manufactured or

a sequence of operations carried out while performing the service;

implementing a selected accounting costing method for actual cost collection and a selected accounting costing method for actual cost presentation by accessing and selectively traversing the hierarchical structure, the selected accounting costing method for actual cost collection being independent of the selected accounting costing method for cost presentation.

2. **(Original)** The method of claim 1, wherein the accounting costing methods for actual cost collection and for actual cost presentation are selected from among a group including Last In First Out (LIFO), First In First Out (FIFO), Most Expensive First (MEF), Least Expensive First (LEF) and Average costing methods.

3. **(Previously Presented)** The method of claim 1, wherein a new unique cost source identifier data structure is created upon each occurrence of a transaction that affects the actual cost of the activity that gave rise to the collected actual cost.

4. **(Previously Presented)** The method of claim 1, wherein a new unique cost source identifier data structure is created at least each time an item is manufactured or purchased and each time an item is received into inventory.

5. **(Previously Presented)** The method of claim 1, wherein a new unique source identifier data structure is created at least each time a job is performed while manufacturing the item or while performing the service, contemporaneously with a performance of the job.

6. **(Previously Presented)** The method of claim 1, wherein the unique cost source identifier data structure is further configured to store a pointer to a data structure.

7. **(Previously Presented)** The method of claim 1, wherein the plurality of attribute fields are configured to store at least one of an indication of a date at which the collected actual cost was incurred, a quantity of items corresponding to the collected actual cost, a number of unit time periods expended in performance of a job, an indication of labor time, resource time, payroll, resource rate, overhead time, overhead rate, actual cost of purchased material and actual cost of outside processing.

8. **(Cancelled)**

9. **(Previously Presented)** The method of claim 1, wherein the hierarchical structure includes a plurality of nodes, each of the stored cost source identifier logical structures being assigned to at least one of the plurality of nodes.

10. **(Original)** The method of claim 7, wherein the implementing step is carried out at a selected node level by rolling up all actual costs within the cost source identifiers assigned to nodes hierarchically below the selected node level.

11. **(Previously Presented)** The method of claim 1, further comprising the step of storing a standard cost within the cost source identifier when an actual cost of one of a job performed and an item manufactured is unknown.

12. **(Previously Presented)** A computer system to compute an actual cost of manufacturing an item or performing a service from collected actual costs incurred while manufacturing the item or performing the service, comprising:

at least one processor;

at least one data storage device coupled to the at least one processor;

a plurality of processes spawned by said at least one processor, the processes including processing logic for:

collecting actual costs of performing a job, manufacturing an item and/or purchasing an item,

creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields;

populating one of the plurality of attribute fields of the created cost source identifier data structure with the collected actual cost;

storing the populated cost source identifier data;

associating each unique cost source identifier data structure to a step carried out while manufacturing the item or while performing the service; and

organizing and storing the cost source identifier data structures as a hierarchical structure that is modeled on:

a structure of the item manufactured, or

a sequence of operations carried out while performing the service;

implementing a selected accounting costing method for actual cost collection and a selected accounting costing method for actual cost presentation by accessing and selectively traversing the hierarchical structure, the selected accounting costing method for actual cost collection being independent of the selected accounting costing method for cost presentation.

13. **(Cancelled)**

14. **(Previously Presented)** The computer system of claim 12, wherein the hierarchical structure includes a plurality of nodes, each of the stored cost source identifiers being assigned to at least one of the plurality of nodes.

15. **(Original)** The computer system of claim 14, wherein said at least one processor implements the selected accounting method for actual cost presentation and the selected accounting method for actual cost collection by rolling up all actual costs within the cost source identifiers assigned to nodes hierarchically below the selected node level.

16. **(Previously Presented)** The computer system of claim 12, further comprising processing logic for storing said cost source identifier data structures in one of a relational or an object-oriented database.

17. **(Previously Presented)** A machine readable medium having stored thereon data representing sequences of instructions which, when executed by a computer system, causes said computer system to perform the steps of:

collecting, in substantially real time, an actual cost of each of a plurality of constituent items or operations affecting a cost of manufacturing an item or performing a service;

creating a unique cost source identifier data structure for each collected actual cost, each created cost source identifier data structure including a plurality of attribute fields;

populating one of the plurality of attribute fields of the created cost source identifier data structure with the collected actual cost;

assigning each collected actual cost to a unique logical structure associated with a corresponding one of said items or operations;

storing each populated cost source identifier data structure to create a hierarchical organization of cost source identifier data structures configured to allow the actual cost of the activity to be ascertained at any stage of a performance thereof, the hierarchical organization being modeled on a structure of the item manufactured or a sequence of steps carried out while performing the service.

18. **(Previously Presented)** The machine readable medium of claim 17, further comprising sequences of instructions for performing the step of creating a new unique cost source identifier data structure for each constituent item or operation that affects the cost of manufacturing the item or performing the service.

19. **(Canceled)**

20. **(Canceled)**

21. **(Previously Presented)** The machine readable medium of claim 17, wherein one of the plurality of attribute fields is configured to store a pointer to a data structure.

22. **(Previously Presented)** The machine readable medium of claim 17, wherein the sequences of operations further cause said computer system to carry out a step of storing a date in which each collected actual cost is incurred.

23. **(Previously Presented)** The machine readable medium of claim 17, wherein the sequences of operations further cause said computer system to carry out a step of storing a standard cost when an actual cost cannot be ascertained.

24. **(Previously Presented)** The machine readable medium of claim 17, wherein the sequences of operations further cause said computer system to carry out a step of storing a standard cost when a transaction cost of collecting the actual cost for any one of said constituent items or operations is excessive relative to a value thereof.

25. **(Cancelled)**

26. **(Previously Presented)** The machine readable medium of claim 17, wherein the storing step stores the hierarchical organization of cost source identifier data structures in one of a relational and an object-oriented database.

27. **(Previously Presented)** The machine readable medium of claim 17, further comprising sequences of instructions for performing the step of:

accessing the hierarchical organization of cost source identifier data structures, and

implementing a selected actual cost collection accounting method and a selected actual cost presentation accounting method based on the accessed hierarchical organization of cost source identifier data structures, the selected actual cost collection accounting method being independent of the selected actual cost presentation accounting method.